



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,808	06/22/2006	Rohini Krishnan	NL03-1474 US1	6873
65913	7590	08/07/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER WHITE, DYLAN C	
			ART UNIT 2819	PAPER NUMBER
			NOTIFICATION DATE 08/07/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

# Office Action Summary

Application No.

10/583,808

Applicant(s)

KRISHNAN ET AL.

Examiner

Dylan White

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 6/22/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

Figures 1, 2A and 2B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

### ***Claim Objections***

Claim 8 is objected to because of the following informalities: the last line contains "determination means 50", however the reference numeral for the determination means should have been removed from the claims. Appropriate correction is required.

Claim 12 is rejected to because of the following informalities: the claim recites the limitation "of the at least on component" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Additionally the claim states on line 3 "determining a load applied at at", the Examiner believes this should be applied to at. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11 and 12, are rejected under 35 U.S.C. 102(b) as being anticipated by Schultz et al. (U.S. Pat. 6,445,245).

Regarding claim 1, Schultz discloses at least one circuit component (903) at which a load is applied (@ pad 943) that can vary during operation (col. 2, lines 37-40) where the arrangement comprises: load determination means (1110, 1111, & 1101 within 963) for determining a load (connected to PAD 943) at the at least one circuit component (903) and adjusting means (1122 @ Fig. 11; detailed drawing of local DCI) for adjusting drive capacity (in drive transistors trees 211 & 212) of the at least one component (buffer 903) responsive to the determination means (1110, 1111, & 1101).

Regarding claim 2, Schultz discloses the determinations means (1110, 1111, & 1101 @ Fig. 11) is configured to determine the load based on configuration information (within configuration memory 1110, Fig 11; detailed drawing of DCI 963) to the circuit arrangement (Fig. 9).

Regarding claim 3, Schultz discloses where the configuration information is stored in a configuration memory (1110 @ Fig. 11).

Regarding claim 4, Schultz discloses where the configuration information comprises a configuration bit stream (col. 15, lines 29-30) defining at least one of an input load and output load (connected to PAD 903) of the at least one component (903).

Regarding claim 5, Schultz discloses where the adjusting means (1122 @ Fig. 11) is configured to vary a buffer (I/O buffer, via control signals FP/FN 1-7 & CP/CN 11-15) or a buffer number of the at least one component (903).

Regarding claim 6, Schultz discloses where the adjusting means (1122 @ Fig. 11) is configured to switch on or off buffers or buffer sections (transistors of Fig. 2) responsive to the determination means (1110, 1111, & 1101 @ Fig. 11).

Art Unit: 2819

Regarding claim 7, Schultz discloses where the adjusting means (1122 @ Fig. 11) is adapted to generate at least one control signal (any one of FP/FN 1-7 & CP/CN 11-15) for switching on or off buffer sections (transistor gate control @ Fig. 2).

Regarding claim 8, Schultz discloses where the adjusting means (1122 @ Fig. 11) is adapted to derive said control signal (one of FP/FN 1-7 & CP/CN 11-15) only from a most significant bit (col. 15, lines 29-33; MSB of four bit memory cell) of a selection signal obtained from the determination means (1110, 1111, & 1101).

Regarding claim 11, Schultz discloses where the circuit arrangement is a FPGA (col. 1, lines 13-16).

Regarding claim 12, Schultz discloses determining a load (connected to pad 943 @ Fig. 9) applied [to] at least one circuit arrangement (903); and adjusting the drive capacity (via local DCI 963) of the at least one component (impedance matching transistors 211 & 212) responsive to the determination step (963).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2819

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al. (U.S. Pat. 6,445,245) in view of Ajit (U.S. Pub. 2002/0113628).

Regarding claim 9, Schultz discloses that of claim 1 but fails to teach where the adjusting means is configured to vary the threshold voltage of a circuit elements in the arrangement.

Ajit teaches (Fig. 6) changing the transistor threshold voltage by biasing the transistor wells with biasing circuit (401), therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the output buffer disclosed by Schultz with the transistor biasing as taught by Ajit for varying the on/off voltage thresholds of the drive transistors.

Regarding claim 10, the combination discloses where the adjusting means (Ajit; 401 @ Fig. 10) is adapted to change at least one bias voltage (PMOS transistors) in response to the determination means (transistors 1001).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dylan White whose telephone number is (571) 272-1406. The examiner can normally be reached on m-f 7:30- 4:00.



Art Unit: 2819

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DW

  
REXFORD BARNIE  
SUPERVISORY PATENT EXAMINER

08/01/07